

CLAIMS

1 1. A method of data exchange in a vehicular multimedia system that includes an
2 interface unit and a plurality of multimedia units each connected to an optical data bus
3 configured as a ring line in the vehicle, comprising:

4 establishing a radio connection between the interface unit and an external unit;
5 and

6 receiving multimedia data at the interface unit via the radio connection and
7 sending the multimedia data from the interface unit over the optical data bus to at least
8 one of the multimedia units.

1 2. The method of claim 1, wherein said step of establishing comprises
2 transmitting data/commands over the radio connection in both directions between
3 the interface unit and the external unit.

1 3. The method of claim 1, comprising receiving and coordinating /arbitrating at the
2 interface unit requests from the multimedia units for the radio connection to the external
3 unit.

1 4. The method of claim 3, wherein said receiving and coordinating/arbitrating at the
2 interface unit comprises:
3 determining the sequence for processing simultaneously received requests
4 according to the location of the multimedia units in the ring line.

1 5. The method of claim 3, wherein said receiving and coordinating/arbitrating at the
2 interface unit comprises:

3 determining with a random selection criteria the sequence for processing
4 simultaneously received requests.

1 6. A multimedia system suitable for use in a vehicle and capable of communicating
2 with an external unit, comprising:

3 an interface unit;

4 a plurality of multimedia units;

5 an optical data bus configured as a ring line in the vehicle, said interface unit and
6 said plurality of multimedia units are each connected to said optical data bus; and

7 wherein said interface unit establishes a radio connection with the external unit,
8 and said interface unit receives multimedia data over the radio connection and sends the
9 received multimedia data over said optical data bus to at least one of said multimedia
10 units.

1 7. The multimedia system of claim 6, wherein said interface unit is located at an
2 arbitrary location along said optical data bus.

1 8. The multimedia system of claim 6, wherein said interface unit comprises a
2 coordination unit that coordinates requests received over said optical data bus from said
3 multimedia units for radio connections to the external unit.

1 9. The multimedia system of claim 8, wherein said interface unit is situated in the
2 ring line as a separate unit.

1 10. The multimedia system of claim 8, wherein said interface unit is integrated into
2 one of said multimedia units situated in the ring line.

1 11. The multimedia system of claim 6, wherein said interface unit comprises
2 means for receiving a request from at least one of said multimedia units, for
3 processing said received request, and for communicating with the external unit over the
4 radio connection to fulfill said received request.

1 12. The multimedia system of claim 6, wherein said interface unit comprises means
2 for establishing full duplex radio communication between said interface unit and the
3 external unit.

1 13. A multimedia system for a vehicle comprising a plurality of multimedia units
2 which are connected to one another by an optical data bus laid as a ring line in the
3 vehicle, characterized in that an interface unit is situated at an arbitrary point of the ring
4 line and can establish a radio connection between the multimedia system and an external
5 unit.

1 14. The multimedia system of claim 13 wherein the interface unit is situated in the
2 ring line as a separate unit.

1 15. The multimedia system of claim 13, wherein the interface unit comprises a
2 coordination unit to coordinate the requests for radio connections to the external unit,
3 which it receives from the multimedia units in the ring line.

1 16. The multimedia system of claim 13, wherein the interface unit is situated in the
2 ring line as a separate unit.

1 17. The multimedia system of claim 13, wherein the interface unit is integrated into
2 one of the multimedia units.

1 18. The multimedia system of claim 13, wherein the external unit is a service center.

1 19. The multimedia system of claim 18, wherein the external unit transmits or
2 receives traffic information from the multimedia system.

1 20. The multimedia system of claim 8, wherein said coordination unit comprises
2 means for determining with a random selection criteria the sequence for processing
3 simultaneously received requests.